

REMARKS

This application has been carefully reviewed in light of the Office Action dated March 4, 2010. Claims 1-18 are in the application, with claims 1, 7 and 15 being independent claims. Reconsideration and further examination are respectfully requested.

Claims 1, 2, 4-12 and 15-17 are amended herein. The only substantive changes are made in claim 7, and the other changes are related to correcting typographical errors or related to form, rather than substance. Support for the amendment is found in the original disclosure, including, for example, original claims 1, 2, 4-12 and 15-17, FIG. 3 along with the corresponding description in the specification, and the specification at the third full paragraph on page 6 and the first full paragraph on page 7. No new matter is believed to be added herein.

Allowable Subject Matter

Initially, Applicant thanks the Examiner for the indication that claims 15-18 are allowed and that claims 3-5, 11 and 12 contain allowable subject matter and would be allowed if rewritten in independent form.

Claim Rejections – 35 USC § 103

Claims 1-2, 6-10 and 13-14 are rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over U.S. Patent No. 6,637,196 (“Tost”) in view of U.S. Patent No. 7,065,958 (“Funk”). These rejections are respectfully traversed, and reconsideration and withdrawal of these rejections are respectfully requested.

Independent Claim 1

Claim 1 is directed to an exhaust emission purifying apparatus for an engine, comprising: a reduction catalyst disposed in an engine exhaust system, for reductively purifying nitrogen oxides with a reducing agent; a reducing agent oxidation catalyst disposed on an exhaust downstream side of said reduction catalyst, for oxidizing the reducing agent passed through said

reduction catalyst; a storage tank for storing therein the reducing agent; and a reducing agent supply device for supplying the reducing agent from said storage tank to said reduction catalyst. The apparatus further comprises a first discharge-forcing device for forcibly discharging a gas in an upper space of said storage tank to an intake system or said exhaust system on an upstream side of said reducing agent oxidation catalyst; a temperature detecting device for detecting a temperature of said reducing agent oxidation catalyst; and a first operation control device for operating said first discharge-forcing device when the temperature detected by said temperature detecting device reaches an activating temperature for said reducing agent oxidation catalyst or above.

The applied references are not understood to disclose or suggest the features of independent claim 1, particularly with respect to at least the features of “a first operation control device for operating said first discharge-forcing device when the temperature detected by said temperature detecting device reaches an activating temperature for said reducing agent oxidation catalyst or above,” as recited in claim 1.

The Office Action admits at pages 2-3 that Tost does not disclose “a reducing agent oxidation catalyst disposed on an exhaust downstream side of said reduction catalyst, for oxidizing the reducing agent passed through said reduction catalyst” nor “a temperature detecting device that detects a temperature of said reducing agent oxidation catalyst.” The Office Action, however, contends at page 2 that Tost discloses “a first operation control device that operates said first discharge-forcing device when the temperature detected by said temperature detecting device reaches an activating temperature for said reducing agent oxidation catalyst or above (e.g., See col. 6, lines 17-60).”

Applicant respectfully traverses the foregoing contentions.

First, as admitted by the Office Action, Tost does not disclose “a reducing agent oxidation catalyst disposed on an exhaust downstream side of said reduction catalyst, for oxidizing the reducing agent passed through said reduction catalyst” nor “a temperature detecting device that detects a temperature of said reducing agent oxidation catalyst.” Accordingly, Tost cannot disclose or teach “a first operation control device that operates said first discharge-forcing

device when the temperature detected by said temperature detecting device reaches an activating temperature for said reducing agent oxidation catalyst or above.” (emphasis added)

Second, as for the passage at Tost’s col. 6, lines 17-60, referred to by the Office Action, Tost discloses the following:

“The pressure in the reducing-agent reservoir 9 is continuously monitored with the aid of the pressure sensor 13. An increase in the temperature causes gaseous ammonia to evolve, which leads to an increase in the pressure in the reducing-agent reservoir 9. If the pressure in the reducing-agent reservoir exceeds a limit value, which is determined according to application, inter alia, as a function of the geometry and configuration of the reducing-agent reservoir, and also of the ambient pressure, and that is stored in a memory 22 of the metering control unit 8, the electric valve 18 is opened by signals from the metering control unit 8. Ammonia flows through the flow-measuring device 19 into the reduction catalytic converter 5.”

Accordingly, Tost teaches that an increase in the temperature causes gaseous ammonia to evolve, and that when the pressure in the reducing-agent reservoir exceeds a limit value, ammonia flows through the flow-measuring device 19 into the reduction catalytic converter 5. Tost, however, does not teach a reducing agent oxidation catalyst, nor a temperature detecting device that detects a temperature of the reducing agent oxidation catalyst, let alone the feature of controlling a device based on the temperature of the reducing agent oxidation catalyst.

Funk does not remedy the deficiencies of Tost. The Office Action points to Funk’s sensors for exhaust gas temperature 7, 8 and contends that Funk’s passage at col. 5, lines 24-67 and col. 6, lines 1-67 discloses Applicant’s claim limitation of “a first operation control device that operates said first discharge-forcing device when the temperature detected by said temperature detecting device reaches an activating temperature for said reducing agent oxidation catalyst or above.”

Applicant respectfully traverses the foregoing contentions.

While Funk discloses sensors for exhaust gas temperature 7, 8 in its FIG. 3, Funks (like Tost) fails to teach controlling a device based on an activating temperature for the reducing agent oxidation catalyst, let alone “a first operation control device for operating said first discharge-forcing device when the temperature detected by said temperature detecting device reaches an

activating temperature for said reducing agent oxidation catalyst or above,” as recited in claim 1.
(emphasis added).

Accordingly, the applied references are not understood to disclose, teach, or suggest the features of independent claim 1, which is believed to be in condition for allowance. Reconsideration and withdrawal of the rejection of independent claim 1 are respectfully requested.

Independent Claim 7

Claim 7 is directed to an exhaust emission purifying apparatus for an engine, comprising: a reduction catalyst disposed in an engine exhaust system, for reductively purifying nitrogen oxides with a reducing agent; and a storage tank for storing therein the reducing agent; a reducing agent supply device for supplying the reducing agent stored in said storage tank to said reduction catalyst. The apparatus further comprises a second discharge-forcing device for forcibly discharging the gas in an upper space of said storage tank; an adsorbing device for temporarily adsorbing thereto the gas forcibly discharged by said second discharge-forcing device; and an oxidation catalyst for oxidizing the gas desorbed from said adsorbing device. Said second discharge-forcing device, said adsorbing device and said oxidation catalyst are disposed on a top wall of the storage tank. After passing through the oxidation catalyst, the gas is to be discharged into an atmosphere.

The applied references are not understood to disclose or suggest the features of independent claim 7, particularly with respect to at least the features in which “said second discharge-forcing device, said adsorbing device and said oxidation catalyst are disposed on a top wall of the storage tank, wherein after passing through the oxidation catalyst, the gas is to be discharged into an atmosphere,” as recited in claim 1.

Accordingly, independent claim 7 is believed to be in condition for allowance. Reconsideration and withdrawal of the rejection of independent claim 7 are respectfully requested.

Remaining claims 2, 6, 8-10 and 13-14 are dependent from their respective independent claims discussed above and therefore are believed to be allowable over the applied references for

at least similar reasons. Because each dependent claim is deemed to define an additional aspect of the invention, the individual consideration of each on its own merits is respectfully requested. Reconsideration and withdrawal of the rejections of the dependent claims are respectfully requested.

The absence of a reply to a specific rejection, issue, or comment does not signify agreement with or concession of that rejection, issue, or comment. In addition, because the arguments made above may not be exhaustive, there may be other reasons that have not been expressed for patentability of any or all claims. Finally, nothing in this paper should be construed as an intent to concede, or actual concession of, any issue with regard to any claim, or to any cited art, except as specifically stated in this paper, and the amendment or cancellation of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment or cancellation.

Conclusion

In view of the foregoing amendments and remarks, the entire application is believed to be in condition for allowance and such action is respectfully requested at the Examiner's earliest convenience. Applicant's undersigned attorney may be contacted at the address and telephone number set forth below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 502203 and please credit any excess fees to such deposit account.

Respectfully submitted,

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